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ABSTRACT

An interpretation is provided of the philosopher L. Wittgenstein's analyses of mental states. The theoretical implications of these analyses for cognitive development and qualitatively oriented researchers are discussed. The mental states examined are: (1) pain; (2) remembering; (3) calculating/adding; (4) following a rule; and (5) reading. Wittgenstein proposes that mental states have their origins in the activities of daily life and the shared agreements of community rather than a priori mental conditions. By setting mental states into the routines of daily life, Wittgenstein takes the position that mental states are products of the relations between the individual and the social world. Mental states are conceptualized as primary and secondary language games. Primary language games consist of shared activities open to public view, while secondary language games are those that take place within the mind, as thinking skills. As an example, it is suggested that individuals learn to add with objects--a public language game--before they learn to add in their heads--a private language game. Rules, symbols, meaning, beliefs, and role models of language games are discussed. Philosophical themes of mental states are described, including clarity of description, the disunity thesis, parallelism, and the relationship between the mental and physical realms. A 28-item list of references is included. (Author/SLD)

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PUBLIC AND PRIVATE LANGUAGE GAMES AS MENTAL STATES: WITTGENSTEIN'S CONTRIBUTION TO THE QUALITATIVE RESEARCH TRADITION

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ABSTRACT

This paper provides an interpretation of, the philosopher, Ludwig Wittgenstein's analyses of mental states. The mental states of reading, pain, remembering, adding, and following a rule are discussed. Wittgenstein's shows that mental states have their origins in the activities of daily life and the shared agreements of community rather than a priori mental conditions. Mental states are conceptualized as primary and secondary language games. Primary language games consist of shared activities which are open to public view while secondary language games are those which go on in our heads, thinking skills. As an example, we learn to add with objects, a public language game, before we learn to add in our heads, a private language game.

INTRODUCTION

The purpose of this paper is to sketch out an interpretation of Ludwig Wittgenstein's analyses of mental states and their theoretical implications for cognitive development and qualitatively oriented researchers. His work in the philosophy of language provides the base for an interpretation of mental states which will be of value to researchers. The mental states to be examined include: pain, remembering, calculating, following a rule and reading. These mental states range beyond those included under the rubric of thinking, and each has a different underlying use in the ebb and flow of daily life and hence has a different grammar. By setting mental states into the routines of daily life, Wittgenstein takes a position that mental states are products of the relations between the individual and the social world.

Mental states will be described in terms of Wittgenstein's concept of the language game. The language game is the concept which situates Wittgenstein within the hermeneutic tradition and thereby links him with researchers today who work within the qualitative research paradigm. The language game provides the conceptual linkage between human actions, words, rules, mental states and community agreement. It is a rule governed activity in which two or more persons participate that is best understood in terms of the metaphor of a game of chess. Within the game of chess, the meaning of an action is determined by its use within

the language game. Rule following plays a critical role in the language game because to follow a rule is not to follow a formulae but to act in accordance with the practices of a community. The practices of a community are examples of the language games which are the foundations of a culture.

Hermeneutics is that intellectual tradition which includes a heterogeneous and diversified group of philosophers, historians and social scientists who rejected the methodological monism of positivism and refused to concede that the physical sciences set the ideal model for the human sciences. Qualitatively oriented social scientists are situated within the hermeneutic tradition and they too are predisposed to react against the monism of positivism (von Wright, 1972). According to Jacob (1987) the main strands of qualitative research include ecological psychology, holistic ethnography, ethnography of communication, cognitive anthropology, and the symbolic interactionists. From a methodological point of view the social scientists who work within this tradition have emphasized natural settings, shared patterns of actions, subjective knowledge and the meaning of actions.

This paper begins with a bare outline of Wittgenstein's work which focuses on the two different philosophical texts he authored that connect him with positivism and to the reactions against posltivism. The second step is to outline a description of the language game, a metaphor, which is central to his later work, and to the description of mental states. There follows

abbreviated discussions of the disunity thesis of language, parallelism between events in the brain and in the world, dualism, verification and justification, and public and private language games. These themes are threads running throughout Wittgenstein's work, and they are used here in the discussions of the different mental states. Following there are discussions of the mental states of rule following, calculating, memory, pain and reading. Finally, the themes which have been identified are summarized to show that together they provide grounds for research set within the qualitative research tradition.

A SKETCH OF WITTGENSTEIN'S WORK

Ludwig Wittgenstein (1889-1951) authored two of the major philosophical texts of the century. The first, the Tractatus Logico Philosophicus, was conceptualized early in his career; the second, the Philosophical Investigations was completed three decades later and is thought by some to be a refutation of the first. In the decades after his death a series of posthumously edited volumes have also been published by the executors of his literary estate. Together these works constitute the corpus of works that undergird these discussions.

Wittgenstein was in the habit of writing in numbered paragraphs. In the Tractatus language is conceptualized as logical system for conveying thoughts. Included in this book is a representational view of mental states in which propositions or factual assertions picture the world. Here is a logical view of

language and the world which evolved out of Wittgenstein's work with the logician, Gotlieb Frege and Bertrand Russell. It is no wonder that the Tractatus became a favorite text of the Vienna Circle and the logical positivists. Wittgenstein was by no means pleased by their interpretation of his work because it ignored his concern with those things which could not be pictured through propositions.

The Philosophical Investigations implicitly acknowledges the short comings of a view of language that is limited to factual assertions. Wittgenstein broadens his scope of inquiry using the metaphor of the language game to provide a synoptic survey of the range of language extending from logic, factual assertions as in science, mathematics, color, sensations, emotions and psychological verbs. He saw his work as therapeutic, i.e., an effort to clear away the philosophical confusions that arise from the misuse of language by philosophers. Ordinary language is perfectly in order, according to him. There is no vantage point or theoretical perspective from which one can survey language. The misuse of language arises when philosophers invent linguistic theories to account for the inadequacies of ordinary language. When it is detached from every day life, "language goes on a holiday," and therein lies the origin of philosophical confusion.

LANGUAGE GAMES

Wittgenstein begins the Philosophical Investigations with a discussion of the language game. He uses the example of a simple language game between a builder and his assistant. In

this primitive language game there are only four words: cubes, bricks, slabs and columns. When the builder wants some materials, he calls for one of the above items. This is a language game which is complete unto itself. In the paragraphs that follow, Wittgenstein presents examples of activities such as the use of charts and diagrams, counting, descriptive geometry and chemical symbols, each of which is a language game unto itself. .

Language games are created, persist, change, disappear, reappear, interact and sometimes conflict with each other. Language games extend from the simple such as: a greeting, a salute or a child's game such as "ring around the rosie," to the strings of language games which are found in theoretical physics. Wittgenstein was fond of using the example of a chess piece as analogous to the role of words in language games. A chess piece such as a "king" has to be understood within the context of the language game of chess. There are rules that define the role of the "king", and different individuals put this chess piece to different uses. This discussion of the language game will touch on: rules, symbols, meaning, beliefs and role models.

Rules

Rules are based on agreements with other language speakers. Public agreement is the foundation of rule following. We can and do follow some rules naturally showing an understanding of clear rules by simply acting in accordance with them, a fact that

can be seen but not explained. Such understanding is the clear basis for following rules in general. We have to interpret rules consciously when they are new or complicated or even weird. The great failing of philosophers in discussing rules is to hold that we follow rules by interpreting or reading off a private formulation of their meaning (Ackerman, 1987).

Symbols

Symbols or signs serve as markers in the language games. Wittgenstein made the following comment: "Every sign by itself seems dead. "What gives it life? In use it is alive. Is life breathed into it there?" (P.I.432). Symbols come alive in the language game. We learn to use symbols through participation in language games. It is in the flow of daily life that we learn to use symbols. Our daily practices are the context in which symbols are used. Much of early child rearing is concerned with teaching the appropriate use of symbols in the language game. Initially words and gestures are used to indicate commands such as, "Be quiet". First the words and then the gestures are faded as children learn the language game of "Being quiet".

Meaning

> Only in the stream of thought and life do words have meaning.
>
> (Z. 173)

The search for the essence of the meaning of words has a long history in the philosophical and psychological literature.

Wittgenstein set out to put much of this metaphysical thinking to rest with his admonition. "Don't ask about the meaning of a word, look and see how it is used in the language game.". Wittgenstein was concerned to set aside the view that the meaning of a word or expression was related to images or essences of thoughts in the head. The latter's view has created considerable philosophical and empirical confusion because it leads to searching for meaning as an intra-psychic phenomenon.

Beliefs

> I believe what people transmit to me in a certain manner. In this way I believe geographical, chemical, historical facts,etc. That is how I learn the sciences. Of course learning is based on believing.
>
> If you have learnt that Mont Blanc is 4000 metres high, if you have looked it up on the map, you say you know it.
>
> And can it now be said; we accord credence in this way because it has proved to pay?
>
> (O.C. 171)

Wittgenstein makes the point that believing and knowing are individually complex and have a complex relationship. There are different kinds of knowing which require different kinds of evidence and circumstances. Believing is a knowledge claim, which on occasion is a stronger claim than, "I know". In the face of error we sometimes retreat from the assertion of "I know" to "I believe". Wittgenstein was particularly interested in how pervasive and groundless are the nature of our beliefs. Much of our early learning takes place within a system, a way of living.

> All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. And this system is not a more or less arbitrary and doubtful point of departure for all our arguments, no, it belongs to the essence of what we call an argument. The system is not so much the point of departure, as the element in which arguments have their life.
>
> (O.C. 105)

In young children statements of believing and knowing are the same. It is only when the child reaches the age of ten or so that they can distinguish between believing and knowing in terms of evidence. It is at this time that children learn to bring evidence to bear on questions.

The verb "to believe" shares with other psychological verbs a difference between first person singular and third person singular present tense. The statement "I believe" can be thought of as an expression by the individual which may be misleading, false, pretense or other. The statement, "She believes" is accompanied by some evidence. Third person statements are observations about which there is evidence while first person expressions are introspective accounts. Consider the example of a child who makes the statement, I don't like people with purple hair while at the same time he has purple hair and his best friend has purple hair.

Role Models

> Not only rules but examples are needed for establishing a practice. Our rules have loopholes open, and the practice has to speak for itself.
>
> (O.C., 139)

Imagine if someone gave you a rule book for learning to play a game such as baseball or to learn how to dance. The role model helps the language game come alive. Imitation is a powerful form of learning especially in the young. A few days after birth infants are capable of shadowing and imitating the gestures of their parents with such appealing moves as imitating the behavior of sticking out their tongues. Language games are learned through training but before there is training, there is agreement about a way of life.

> The school boy believes his teacher and his school books.
> (O.C. 34e)

The trust that the child has in her parents and her teachers is remarkable. It should be remembered that young children do not distinguish between believing and knowing. What their significant role models tell them is what they know and believe. When the teacher instructs the child to play the language game, the child plays with complete trust, does not get tired and is caught up in the flow of the game.

MENTAL STATES: SOME PHILOSOPHICAL THEMES

A number of philosophical themes run through Wittgenstein's analyses of mental states. He turns back to these themes, time 8nd time again, as he examines one mental state after another. His purpose is to undermine old ways of thinking about mental states and to show a different way of viewing the world. A major dilemma in the present discussion, of course, is that it was never Wittgenstein's intention to set forth a conceptual

framework for cognitive researchers. He wanted to show the shortcomings of old ways of doing philosophy. His work then has to be understood against a backdrop of philosophical issues that stretch back beyond Wittgenstein and Descartes.

DESCRIPTION

Clarity of description is the driving force behind Wittgenstein's exigesis of language. This approach to doing philosophy had its roots in the totality of his approach rather than in a single isolated doctrine. It is the inclusion of the several principles which help create clarity. A survey of the Philosophical Investigations reveals almost a total absence of technical language and the dominance of ordinary language. This is accomplished by constantly examining language from different vantage points. The interweave of description, the challenging of the assumptions of unity of language, dualism, parallelism, the private language argument, the role of community agreement in justification help press the search for a clear definitions of the boundaries of linguistic usage.

By examining the usage of linguistic terms Wittgenstein reveals its underlying grammatical structure. The interplay of practice and circumstances is what gives form to the grammar of expressions. In a sense then the grammar of language is arbitrary (Malcolm, 1986). What is meant by that?

> Why don't I call the rules of cooking arbitrary, and why am I tempted to call the rules of grammar arbitrary? Because 'cooking' is defined by its goal, whereas speaking is not. That is why the use of language is autonomous as cooking and washing are not. You cook badly if you are guided in your cooking by rules other than the right ones; but if you follow other rules than those of chess you are playing another game; and if you follow grammatical rules other than such-and-such ones, you are not saying something wrong, but are speaking of something else.
>
> (Z.320)

DISUNITY THESIS

The disunity thesis runs through out Wittgenstein's work. According to Hacking (1986) and Ackermann (1988) the areas of factual assertions, mathematics, logic, color, sensations, gestures, dreams require different kinds of grammatical descriptions. Each of these domains is composed of a myriad of overlapping language games which have to be understood within the weave of life. Wittgenstein is not a cognitive psychologist, he is not concerned with causal explanation but rather with description.

> Ask yourself whether our language is complete;-- whether it was so before the symbolism of chemistry and the notation of the infinitesimal calculus were incorporated in it; for these are, so to speak, suburbs of our language. (And how many houses or streets does it take before a town begins to be a town?) Our language can be seen as an ancient city; a maze of little streets and squares, of old and new houses, and of houses with additions from various periods; and this surrounded by a multitude of new boroughs with straight regular streets and uniform houses.
>
> (P.I. 18)

PARALLELISM

Parallelism is the view that for each thought, sensation or feeling, there is a corresponding event, process or state in the

brain. Philosophers often argue that the mind and the brain are parallel structures. There is a causal connection between the two such that experiences in the world produce changes in the brain. Malcolm (1986) argues against philosophical parallelism by suggesting that its target is misplaced. Instead of concerning ourselves with the relations between the world and mental states, it would be more sensible to recognize that the target of inquiry should be the human being.

> Only of a human being and what resembles (behaves like) a living human being, can one say; it has sensations; it sees; is blind; hears; is deaf; is conscious or unconscious. (P.I. 281)

Malcolm makes the point that the application of these terms has its roots in the paradigm of a living human being. It is only in the expressive human face and eyes, in the gestures, posture, and actions of a human being, in human speech, that we can perceive in their fullest form, consciousness and thought, desire, decision, fear or anger. We apply some of these psychological terms to animals -- but the further we go down in the animal scale, the greater the distance from the human paradigm, the more difficult it is to find a foothold for these terms. (Malcolm,1986,p.184)

There is also a parallelism which is closer to theorizing in psychology. It is assumed that mental experiences, i.e., learning produces psychological structures in the brain. These structures of the brain are taken to be the accumulated habits, mental states, beliefs, etc, which have a parallel place in the brain. This version of parallelism is very seductive. The role

of psychological structures in the brain has been clarified by Palermo (1987) who examined the issue by tracing its changing role in Piaget's theory. Piaget shifted from an emphasis upon structure to a more functionalist position in his later years. Nevertheless, explicit in Piaget's approach is the view that how we come to know something is more important than what we know. The presence of certain structures is a prerequisite for the acquisition of further knowledge. Palermo surmised from his review that it was previous learning that determined the acquisition of subsequent knowledge. This latter form of parallelism also sets up barriers to a clear view of language and research.

MENTAL AND PHYSICAL

One of Wittgenstein's intentions was to dissolve the dichotomy of the mental and the physical and to show that both have common origins in the shared experience of comity. It is common practice to view Wittgenstein's work as a reaction against the dualism of Descartes. Descartes formulation of the dichotomy of the mind and body can be considered an impressively successful accomplishment. It is an edifice which stands to this day and which permeates much of contemporary thinking about cognition. This view draws a line between mind and body. Mind is that which is immediately and certainly known. The mind is the subject and the body is object. It is the mind which directs, desires, intends, expects, feels, thinks, perceives, will. Descartes took up the task of explaining how immaterial mental events of will or

emotion exert influence upon the body. It is the language game that is conceptually positioned to challenge this formulation.

MENTAL STATES: PUBLIC AND PRIVATE ASPECTS

> One of the most dangerous ideas for a philosopher is, oddly enough, that we think with our heads or in our heads.
>
> The idea of thinking as a process in the head, in a completely enclosed space, gives him something occult.
>
> (Z. 605, 606)

Wittgenstein does not deny that there are mental states, he would readily admit to the obvious. What he questions is the role that the mental states in our heads play in our daily activities. He reverses the usual formulation and argues that it is our daily activities which bring about our mental states.

There are public and private aspects to mental states. The examples of pain, adding, remembering and reading are used to show that these mental states have characteristic modes of public and private expression sustained by a shared agreement. These mental states are a part of the daily activities of a people. It was Wittgenstein's purpose to bring these mentalistic concepts into public view. The result would be a clear view of the mental and social world. Each of these mental states touches a different set of issues in the understanding of mental states.

Much of the Philosophical Investigations and Remarks on the Philosophy of Psychology explores the difficulties connected with the use of introspective accounts of mental states. It can be said that Wittgenstein was more successful at demonstrating

the social foundations of mental states than of excising private mental states from philosophical or psychological inquiry. According to Hintikka and Hintikka (1986) it was never Wittgenstein's intention to dismiss mental states but simply to recognize their intractable and problematic role in human behavior. It is for this reason that Hintikka and Hintikka introduce the concepts of primary and secondary language games. For the purposes of this discussion, these language games will be public and private language games.

The recognition of public and private language games makes clear an implicit recognition by Wittgenstein of the public and private aspects of mental states. Private mental states are making a comeback under the aegis of cognitive psychologists. The banishment of introspection by behavioral psychologists lasted for almost a half a century, but once again introspective accounts are becoming an accepted part of cognitive psychology. Many cognitive psychologists are finding private mental states to be necessary components in the explanation of mental states. It is important to remember that private language games have their origins in the agreement of community.

A clear example of the relation between public and private language games can be seen in the relation between calculating with concrete objects and calculating in the head. Wittgenstein put the issue in the following terms:

> Only if you have learnt to calculate - on paper or out loud - can you be made to grasp, by means of this concept what calculating in the head is.
>
> (P.I., xi, p. 216)

VERIFICATION AND JUSTIFICATION

The issues of justification and verification have a complex set of relations. The shift in focus from the Tractatus to the Philosophical Investigations marked a transition from an emphasis upon a verificationist theory of meaning to the reliance upon evidence and justification. Truth and falsity of factual assertions in the Tractatus was simply a matter of applying a measuring instrument to reality. This tactic found common ground with the members of the Vienna Circle, and led them to conclude that he was a behaviorist. Rather than asking the question, what is the measuring rod that can be laid against this reality, the new question in the Investigations became under what conditions is this statement or action justified. What evidence can be bought to bear on the statement?

The disunity of language makes the epistemological problems more complex because different areas of language acquire their respective stabilities from reliance on different contexts and communities. The different areas of language reflect their different histories and uses. It would follow that these areas would call forth different kinds of evidence as justification. The language games of mathematics, factual assertions, color, sensations and psychological verbs call forth different criteria for justification.

How do we judge truth and falsity with regard to private language games. This is a matter of semantics rather than justification (Hintikka and Hintikka, 1986). Private language

games are parasitic upon public language games. For example, there are natural responses to pain that can be observed and agreed to by others. The actions and other private language games that are associated with the public language games are a matter of learning certain practices. Some individuals might learn deceptive language games or the language games of the denial of pain. These are different language games which have different uses. Private language games therefore have to examined case by case to find their uses.

A SURVEY OF MENTAL STATES

Wittgenstein set out to provide a clear view of mental states while at the same time setting that view on very different grounds. The following examples illustrate this different way of looking at mental states while at the same time identifying some stumbling block to a clear view. The examination of rules and calculating initiates Wittgenstein's critique of the notion of a priori forms of knowledge. By showing that calculating and following a rule have their origins in daily life, one of the major stumbling blocks to a clear view of language is removed. The analysis of the mental state of pain shows that even a "natural" sensation such as pain takes its meaning from the social world. As strange as it sounds, Wittgenstein shows that pain is not a private language that belongs to me alone. Remembering brings up the question of whether there is an "essence" in the brain which is the basis for memory. Wittgenstein views memory as the ability to "go on". Reading is

a complex of language games that begins as a public practice and gradually becomes "a private" language game. The philosophical themes which he applies to these mental states show a complexity and diversity in ordinary language which was not apparent at first glance. In the discussions of mental states which follow there is no effort made at completeness in reviewing the social science literature, only an attempt at showing the different grammars of these mental states.

THE EXAMPLE OF RULES

> A rule stands there like a sign-post. Does the sign-post leave no doubt open about the way I have to go? Does it shew which direction I am to take when I have passed it; whether along the road or the footpath or cross-country...And if there were, not a single sign-post, but a chain of adjacent ones or of chalk marks on the ground--is there only one way of interpreting them?
>
> (P.I. 218)

When Wittgenstein chooses to describe "following a rule", he takes examples such as following a mathematical rule, following a sign and reading a table of symbols. His purpose is to show that there is no essence to following a rule such that one is "guided" to the right answer. Following a rule is to act in accord with the rules of a community. It is easy to imagine that communities may differ with regard to how they choose to follow a sign. To follow a rule is not to be guided by a blue print but to be guided by public practice set within a community of agreement.

That there is no mental compulsion in following a rule is

seen in an examination of an arithmetic series --- 2,4,6,8. A skeptical paradox is presented concerning the series. The paradox is that "No course of action can be determined by a rule." It is always possible to fashion any number of solutions as to what the next number might be. The counter point is that, "Every minute of the day, someone is saying 2,4,6,8,10 and nobody objects. This is true. The point is that the rule does not tell you how to proceed; it is the community of agreement that tells you how to proceed. It is this same community of agreement that permits the knowledge claim, "I know how to follow the rule". The relation of primary and secondary language games is mostly a matter of practice. When we are faced with complicated rules, our most common habit is to practice both the public and private language games.

THE EXAMPLE OF CALCULATING

> To understand calculation in the primary school, a child would have to be a great philosopher; failing that, he has to put up with exercises.
>
> Notebooks (Sept. 1930)

"He finds himself thrown back on the problems of arithmetic as it were against his will. He sees in arithmetic, an unconquered fortress of the enemy, with this enemy in one's rear one cannot march into the territory of psychology" (Nyiri, 1986). These are the comments made by Nyiri as he summarizes Wittgenstein's state of mind as he returned to philosophy after a ten year hiatus in 1929 leaving behind the logic of the Tractatus and before taking on the complexities of color, sensations and

psychological states.

Kripke (1982) argues that Wittgenstein takes up rule following and mathematics because both are assumed to occupy a realm of the universal or a priori. Rules are taken to be the fundamental element in mathematics. As such, rules occupy a special role in the domain of mental states and are the building blocks of mathematics. It is the view that rules and mathematics occupy a special realm of the universal or a priori that Wittgenstein challenges. Mathematics, addition, calculating are taken by him to be shared activities which have agreement in a way of life. This view is in contrast to those who take the mathematics to be concerned with the discovery of a priori given knowledge.

How do we justify the knowledge claim that, "I know how to calculate". This is a matter of community agreement, calculating has its origins in the daily life of the community. It is that community of agreement that sanctions knowledge claims about activities like calculating, measuring, counting and estimating. Wittgenstein makes the point that when one first learns to count these language games can be learned to the beat of a metronome. But what of the relationship between the public and private language games of calculating?. The private language games of calculating are learned in practice just as their counterparts in the public domain. There is widespread acceptance that learning and practicing the public and private language games of calculating are matters of importance in the community.

THE EXAMPLE OF MEMORY

Wittgenstein descriptions of memory have two targets in sight. He wants to critique the archival theory of memory and in in its place, he argues for a theory of memory which is based on the ability to follow rules or "to go on". Memory is a practice that involves human activity, and when we are asked to remember, this becomes a request to go on with the activity. The archival theory of memory assumes that there is an essence to memory that is stored in the brain.

Imagine the following phenomenon. If I want someone to take note of a text that I recite to him, so that he can repeat it to me later, I have to give him paper and pencil; and while I am speaking he makes lines, marks, on the paper: if he has to reproduce the text later he follows those marks with his eyes and recites the text. But I am assuming that what he jotted down was not writing, it is not connected by rules with words of the text; yet without these jottings he is unable to reproduce the text; and if anything in it is altered, if part of it is destroyed, he gets stuck in his reading or his reciting the text uncertainly or carelessly, or cannot find the words at all--This can be imagined! (Z612)

Wittgenstein continues Z612 as follows: What I called jottings would not be a rendering of the text, no so to speak a translation into another symbolism. The text would not be stored up in my jottings. And why should it be stored up in our nervous system?

The mental state of memory will be approached from a philosophical and a psychological perspective. Wittgenstein asks the question, What is the essence of memory while psychologists have been concerned with identifying the causal correlates of different kinds of memory. Here we can see the two different perspectives at work. It is possible to reframe the problems of memory which we will discuss as a question of following a rule.

Memory is not a simple trait as cognitive researchers have

discovered (Jenkins, 1974; Neisser, 1978). Rather it is a complex trait which is much influenced by context. Remembering serves an organic purpose in daily life. It has been found to be useful and specific to particular ecological settings. More specifically Dixon (1987) argues that memory skills are influenced by a changing matrix of motivation, affect, belief systems and situations. The activities in which remembering is embedded includes the various dimensions of the language game as described previously. Within the language game symbols, meanings, role models and rules have a place.

Memory has been found to be inextricably linked to cultural-contextual variables (Cole, Gay, Glick and Sharp, 1971). These researchers found that studies of memory are often confounded with task requirements and much influenced by its role in daily life. In their initial study they found striking differences in a free recall task between American children who had attended school and Liberian children who were not school attenders. (There were no such striking differences between Nigerian school attenders.) Then the researchers modified the task into meaningful stories. The telling of tales are language games which are familiar to children who do not attend school in Liberia.

What are the conditions of justification for the practice of memory. Memory is the ability to go on, and the justification for the claim that I remember is an appropriate recounting of past events. It is the community which provides the evidence that the public language games of remembering are true. The

private language games of remembering are also a matter of practice. In the natural course of living in the world we learn to remember and we spend time practicing those complex sequences of statements that become private language games.

THE EXAMPLE OF PAIN

The description of pain by Wittgenstein is a pivotal issue because he uses the sensation of pain to distinguish first person singular (introspection) expressions from third person singular (observational) statements. The bifurcation between first and third person accounts is typical of psychological topics such as: feelings, emotions, beliefs, sensations, etc. Statements in the first person case are considered a "natural expression" while third person observations can be verified by observation or inferred from evidence. A child who learns to replace the moan with the statement, "My arm hurts". The statement his arm is hurting can be verified by observation and evidence. Where is the evidence when I make the statement, "My arm hurts"?

First and third person statements take different of verification and justification. First person psychological statements have no means of verification. According to Wittgenstein first person psychological sentences replace and express non-linguistic reactions.

> A child has hurt himself and he cries; and then adults talk to him and teach him exclamations and later sentences. They teach the child new pain-behavior. "So you are saying that the word "pain" really meanings crying?" On the contrary, the verbal expression of pain replaces crying and does not describe it.

Third person statements such as, "He is in pain.?", can be verified via agreement of the community and evidence. Pain exists in and through language games (Fisher, 1986). We learn to use certain linguistic expressions to indicate the experience of pain. Our talk of pain is different from our talk of chairs, trees and atoms. According to Fisher, it is important to recognize that pain is not a simple momentary experience but a changing experiential field. Further, pain comes and goes; it alters and fades away. The traces of pain are left in the language but the pain itself is gone.

Wittgenstein thought it important to show that the sensation of pain could only be understood within the weave of daily life. On this view there is close agreement from current research in neuropsychology. Gazzaniga (1985,1988) details the complexities of pain when he reports that there are patients who have injuries and feel no pain; there are others who have no injuries and feel pain; and some have pain where there is no limb. Individuals from different cultures vary widely in their perceptions of pain. Italians, Israelis and Mediterranean cultures tolerate heat very poorly as compared to northern Europeans. The Nepalese mountain people show a tolerance for pain which is exceptional by western standards, and yet carefully done experiments show that they are

as sensitive to pain as westerners. Note that these accounts of pain are first person expressions by the individuals of their pain. Interestingly, here is a place where there is a semantic relationship between public and private language games. Each culture gives a different meaning to the relation between public and private language games.

As discussed earlier, the knowledge claim that, "I am in pain." is an expression that has little evidence. It is possible to simply be pretending. By contrast, the third person singular claim, "She is in pain." is a knowledge claim that can be confirmed by certain signs that are accepted in the community. These signs or criteria include: exclamations, bodily movements, facial expressions and so on. These moves in the primary language game become connected to secondary language games such as: pretending, ignoring and exaggerating pain. The connections between these public and private language games are to be understood in relations to the practices and circumstances of the individual.

THE EXAMPLE OF READING

How shall we describe the mental state of reading? Wittgenstein provides the following examples.

> We give someone who can read fluently a text that he never saw before. He reads it to us--but with the sensation of saying something that he has learnt by heart (this might be the effect of some drug). Should we say in such a case that he was really reading the passage? Should we here allow his sensations to count as criterion for his reading or not reading?

> And remember too that there is a continuous series of transitional cases between that in which a person repeats from memory what he is supposed to be reading, and that in which he spells out every word without being helped at all by guessing from the context or knowing by heart.
>
> (P.I. 160,161)

Reading is a group of language games which children learn to play with their teachers and the printed page. The mysteriousness of reading has to do with the fact that reading is not one language game but many. The language games are very sensitive to contextual variables such as: the beliefs of the students and teachers, motivation, linguistic differences, as well as the shared social background of the participants.

Reading is composed of the language games of: letter naming, sound blending, letter sound correspondences, meta-linguistic awareness, decoding, word recognition, etc. These language games are learned at different rates and at different moments by the acquisition of other skills. In addition, learning comprehension turns out to be not one language game but several. Chall (1986) reviews the literature on comprehension and reports that the prevailing view of the field is that learning comprehension is composed of a number of different skills.

It is of interest to consider the possibility that reading consists of public and private language games. The first are those skills which are taught directly by the teacher. Secondary language games are parasitic upon and dependent upon the primary language game. For example, as children learn the primary language game of decoding, they learn to verbalize out loud as

well within their heads. Thus while the child is learning the primary language game, some children are also learning the secondary language game.

Reading is a complex of language games which begin in public and which we learn to make private. It is a series of language games which we routinely expect to be private at one time and public at another. These language games are more easily disrupted by such factors as: anxiety, fear, lack of confidence, disbelief in self, etc. Private language games are often quite fragile because they do not have public support of community and context. Reading is one of the pivotal skills in the child's process of schooling. As a result teachers, parents and children are quite anxious and nervous about the learning of these language games. It is likely this anxiety often blocks the ability of some children to learn to read.

How do we justify the statement, he is a reader of the first grade primer, "Dick and Jane"? Under what circumstances will this child be able to read? A variety of different kinds of evidence are necessary to discover if the child knows how to read. These different tests of the ability to read make it clear that evidence plays a changing role in the justification of the claim that I know how to read. By contrast the difficulties involved in moving from public and to private language games are many if we are to judge from the many children who do not learn how to read. Perhaps it is the case that we don't have the appropriate practices in hand for teaching the public language games of reading. Or perhaps the problem lies in not knowing how

to teach the private language games. Reading may be a case where the practice is at one moment public, then private and so on.

NOTHING IS HIDDEN:

A QUALITATIVE RESEARCH APPROACH TO MENTAL STATES

> The technology is available and we implant a microprocessor from a handheld calculator in the brain of a child. The child operates the implanted digital calculator with blinks of its eye lid. Suddenly the child has the ability to add, subtract, multiply, divide, do sins, cosines, logarithms, and so on at lighting speeds.
>
> What questions come to mind about the child's abilities, intellectual capacities, development, etc?
>
> Consider the same child who holds a handheld calculator in his hand. This child has the ability to add, subtract, multiply,divide, do sins, cosines, logarithms and so on at lighting speeds.
>
> How do our perceptions of these children differ? One child is seen as having new enlarged capacities while the second has a mechanical device.

This example highlights the hold of the mystique that the mind is centered in the skull has on current approaches to inquiry. The contrast in our views of calculating in the head with a microprocessor and with a hand held calculator are strikingly dissimilar. Enclosing the skill of calculating within the skull seems to present a range of possibilities which are not inherent in the handheld calculator. We have a very different picture of calculating when it is set in the brain. By contrast it seems strained and all but discredited to hold the view that thinking has its origins and foundations in the world. The ease with which we are tempted to dismiss the power and usefulness of calculators as a tool for teaching and enhancing development are clear.

The philosophical themes which Wittgenstein uses to describe mental states also provide the grounds for a qualitative approach to inquiry. The previous discussion of mental states has deliberately been wide ranging to extend beyond thinking skills to consider the mental states of pain, memory and following a rule. By extricating and combining the different analyses, it is possible to show the grounds upon which a Wittgensteinian view of mental states stands. At the same time this view shares common grounds with a qualitatively oriented view of mental states.

Another element in dispelling the mystic of mental states is the use of ordinary language. For Wittgenstein the use of the language of ordinary people is a cardinal principle, a perspective which he shares with qualitatively oriented researchers. For some qualitative researchers the language of ordinary people is the basis for interpretation. For Wittgenstein the language of ordinary people is the beginning and the end. The language games of ordinary citizens are the bedrock of a culture. For Wittgenstein this is where explanation comes to an end. There is an effort made to avoid generalizations and to attend to those statements which are made within a particular context. It is ordinary language understood within its context that was the target of inquiry for Wittgenstein and which sets a different agenda for inquiry.

The concept of public and private language games provides a conceptual linkage between public and private events. It is through the language game that language reaches out to reality. This bridge between the mental and physical provides a way of out

of the dilemma of dualism. The readmittance of introspective accounts in cognitive research is long overdue and does indeed provide a necessary link in the process of cognitive explanation. The explication of introspective accounts will benefit from the untangling of first and third person accounts in the social science literature.

Subjective experiences have long been considered central to the work of many qualitatively oriented researchers. Much of Wittgenstein's work can be reconceptualized as providing detailed analyses of the routes through which subjective experiences can be most appropriately included into inquiry. Central to the analysis of subjective experiences is the distinction between first and third person statements. First person statements such as,"I am angry." are expressions and not a statement which can be confirmed. For example, there are many ways that an individual might choose to express anger or belief and often little agreement can be found among observers. Third person statements such as, "He is angry.", is made on made on the basis of evidence. This reconceptualization of first and third person states reaches out for a different approach to issues of evidence and justification.

The issue of verificaton and justification are fundamental methodological issues in the sciences. Wittgenstein's views evolved as he turned his attention from logic and factual assertions at the time of the Tractatus to the exegesis of color, sensations, emotions and psychological verbs in the Investigations. Logic had take care of itself according to

Wittgenstein. What he meant here is that the postulates and axioms of logic are its means of verification. The truth or falsity of a factual assertions, color, emotions, reading, and calculating have different grounds for justification. Each of these different areas of language has its own patterns of evidence and justification as do the private language games which accompany them. The recognition of the complexities of justification and evidence in public and private language games yields a myriad of different kinds of language games with attendant puzzles with regard to the semantic relations between them.

When these different themes come together, it is clear that Wittgenstein's most significant contribution is a new way of thinking about mental states. The richness and diversity of his thinking can only be alluded to in this paper. The true measure is to be found in examining his work in the original and the ever increasing secondary literature. His way of doing philosophy has subtle and different possibilities for the understanding of social and mental life.

Perhaps Wittgenstein's approach to explaining mental states and context might be best be understood through a comment which he made to his friend, M.O.'C. Drury, (Rhees, 1984).

"Drury: What about Hegel?

Wittgenstein: I don't think that I would get on with Hegel. Hegel seems to me to be always wanting to say that things which look different are really the same. Whereas my interest is in showing that things which look the same are really different. I was thinking of using as a motto for my book a quotation from King Lear: "I'll teach you differences." (p. 156)"

NOTES

1. This version of Wittgenstein's work is not the standard philosophical account rather it reflects an effort to make Wittgenstein's ideas accessible to educators and psychologists.

2. Throughout the text of this paper abbreviations are used for quotations from the different texts authored by Wittgenstein. It is standard practice to use the following abbreviations: Philosophical Investigations (P.I.), On Certainty (O.C.), Zettel (Z.), Last Writings (L.W.), and so on.

3. The organization of the concept of the language game as used here is taken directly from the work of Wittgenstein. This interpretation of the language game was created so to provides a linkage with on going research in the area of psychology and education.

4. Hintikka and Hintikka (1986) use the terminology of primary and secondary language games, the terms public and private language games have been used here as substitutes. Hintikka and Hintikka's interpretation of Wittgenstein's work is a radical departure from the standard interpretation. It is used here because it provides it provides a bridge between Wittgenstein's work and current research education and psychology.

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